TFM-1500L

Specifications

Circuit:	14 Transistor, Superheterodyne
Frequency Coverage:	FM 87~108 Mc (3.44~2.78 m)
	SW 5.95~16 Mc (50.4~18.75 m)
	MW 530~1,605 Kc (566~187 m)
	LW 150~285 Kc (2,000~1,053 m)
Intermediate Frequency:	FM 10.7 Mc AM 455 Kc
Antenna System:	FM/SW Built-in Telescopic Antenna
	MW/LW Built-in Ferrite Bar Antenna
Maximum Sensitivity: (at 50 mW Output)	FM 0.95μV
	SW 1.6μV
	MW 30μV/m
	LW 71μV/m
Selectivity:	31 dB at 10 Kc off resonance, at 1,400 Kc
Power Output:	820 mW (undistorted)
	1.3 W (maximum)
Speaker:	Oval Type, 4″×6″ (10×15 cm), PM dynamic, 8Ω
Current Drain:	26mA (FM/AM) at zero signal, 250 mA at 820 mW output
Power Source:	Four "D" size Flashlight Batteries, 6V in total
	or House Current by using SONY AC Adaptor (AC-90E)
Dimensions:	10 3/8″(W)×8 9/16″(H)×4 1/16″ (D)
	(264×218×103 mm)
Weight:	5 lbs 12 oz (2.6 kgs) with batteries

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SERVICE MANUAL

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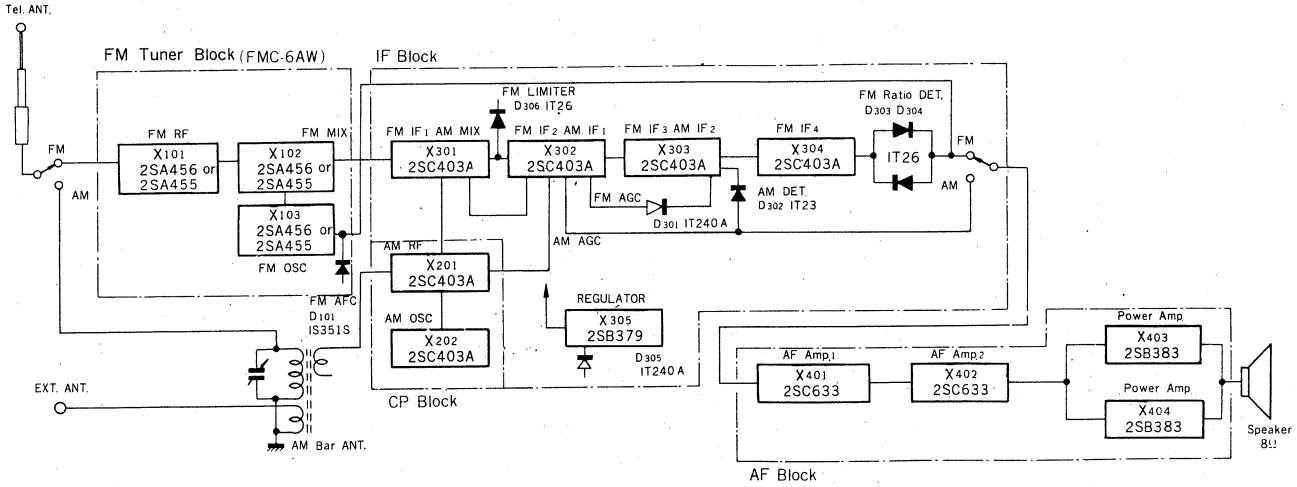
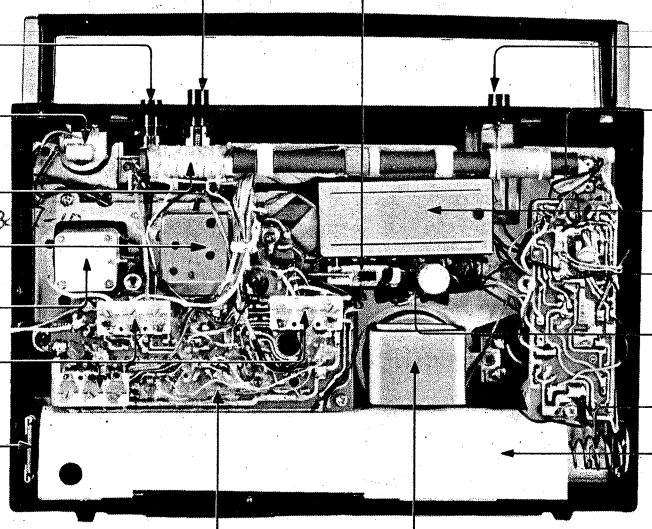
FM-1500L

Block Diagram



Interior View



3-823-012-01
Push Button, AFC ON/OFF

3-823-012-01
Push Button, DX/Local

1-502-073-
Tuning Meter

1-401-293-
Ferrite Bar Antenna

~~Y-38230-51~~ 8-98[illegible]-3
Complete FM Tuner
(FMC-6AW)

1-151-159-
AM Tuning Capacitor

1-141-015-
Trimmer Capacitor 3unit

X-38091-8
Plate, battery positive,
contact Ass'y

1-538-480-13
Prited Circuit Board(CP)

1-513-275-
Switch, FM AM select

3-819-511-
Push Button, Power
(ON/OFF Switch)

1-221-818-
Volume and Tone Controls

3-823-025-
Cover, IF shield case

1-538-538-12
Printed Circuit Board(AF)

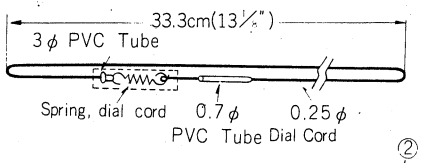
1-538-906-11
Printed Circuit Board(IF)

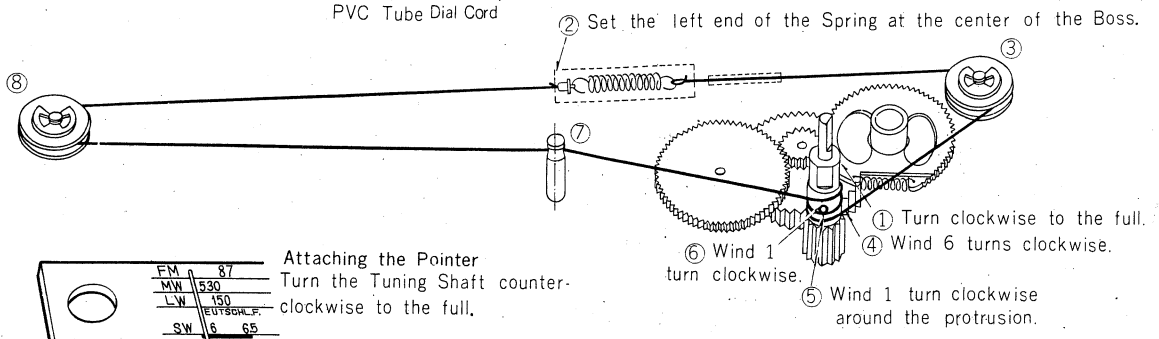
3-819-939-
Spring, battery negative

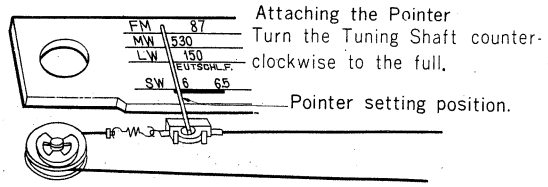
3-998-010
Battery Holder

1-502-069-21
Speaker

Stringing Dial Cord

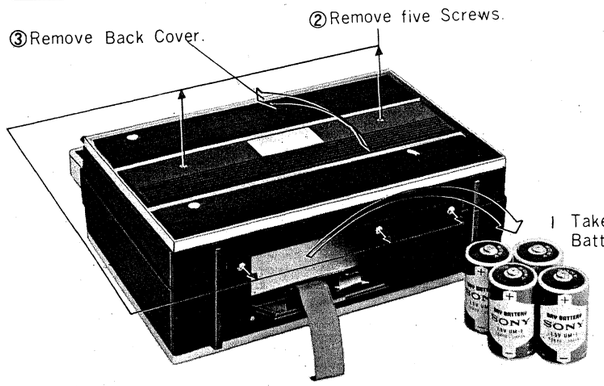



② Set the left end of the Spring at the center of the Boss.
③
⑧
⑦
① Turn clockwise to the full.
④ Wind 6 turns clockwise.
⑥ Wind 1 turn clockwise.
⑤ Wind 1 turn clockwise around the protrusion.

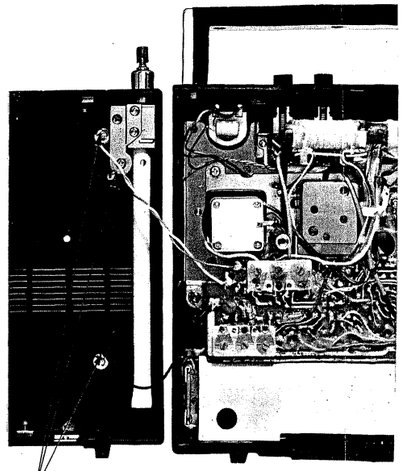


TFM-1500L TFM-1500L

Removal of Back Cover

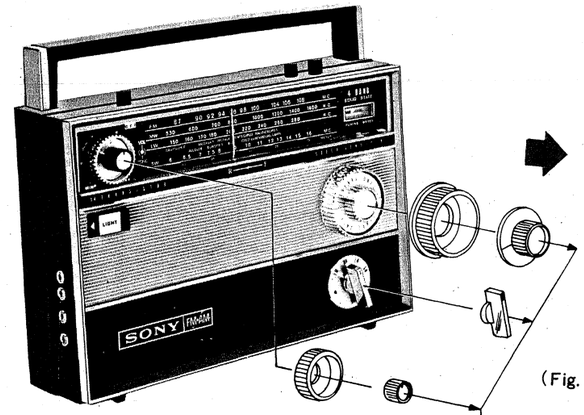


(Fig. 1)

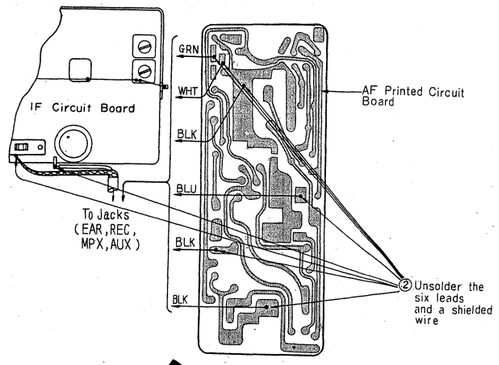


(Fig. 2)

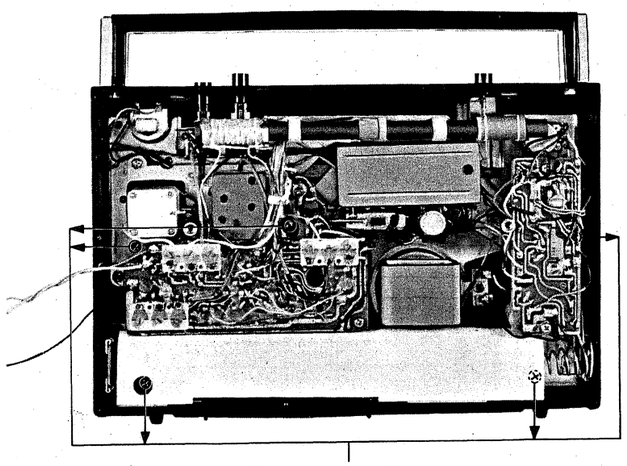
Removal of Chassis



(Fig. 3)

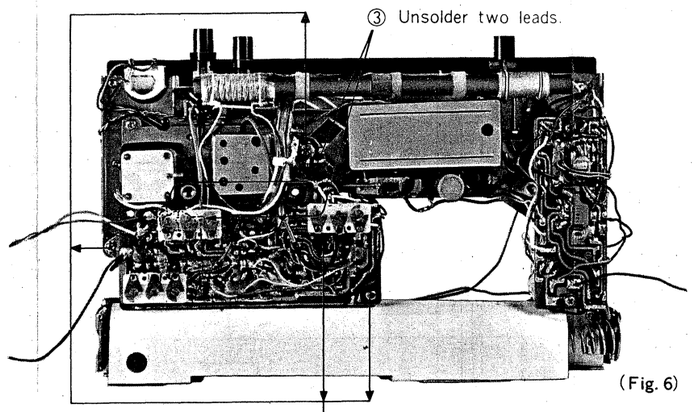


(Fig. 4)



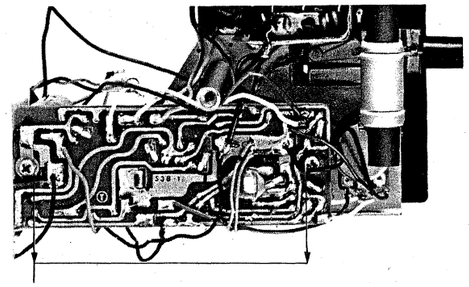
(Fig. 5)

Removal of CP Circuit Board



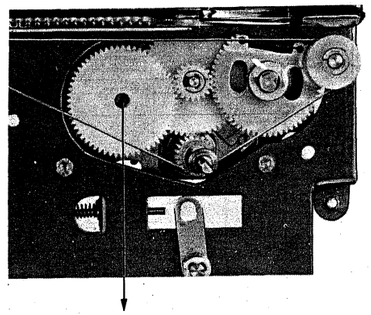
(Fig. 6)

Removal of AF Circuit Board

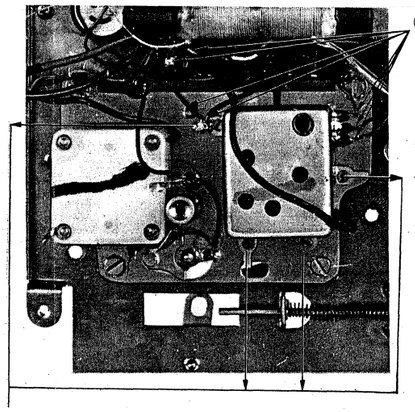


(Fig. 7)

Removal of FM Tuner (FMC-6AW)



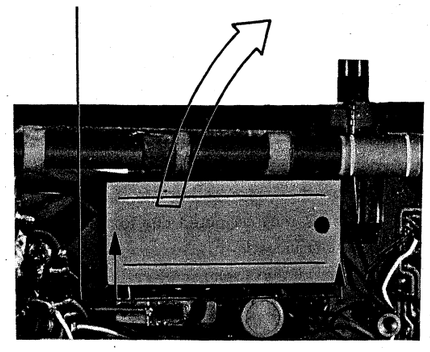
(Fig. 8)



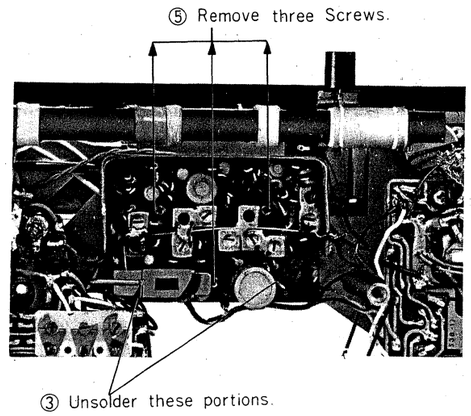
(Fig. 9)

Removal of IF Circuit Board

① Unsolder these portions. ② Remove IF Shield Case.

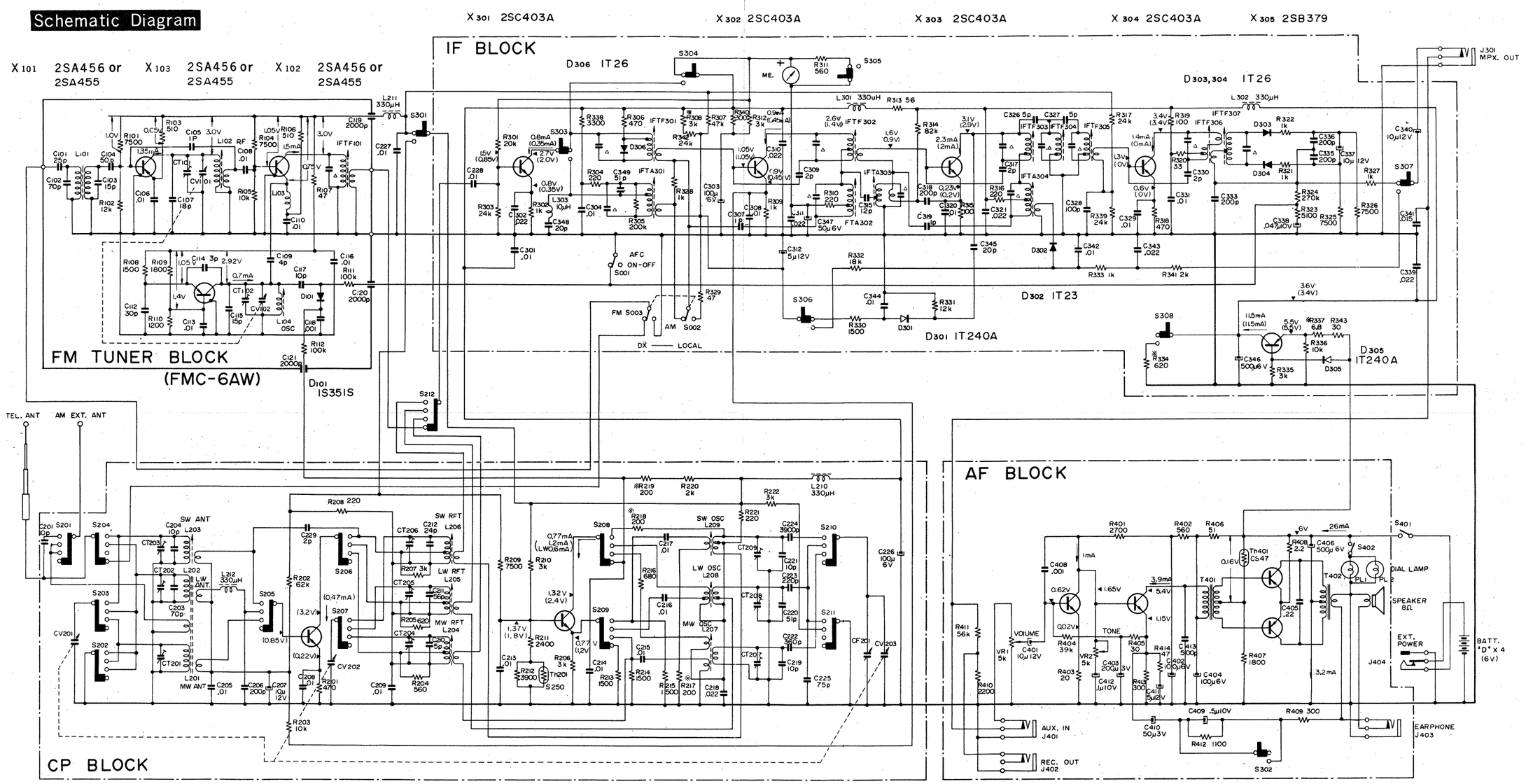


(Fig. 10)



(Fig. 11)

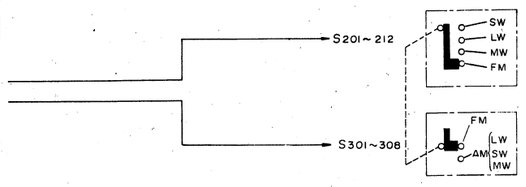
Schematic Diagram



Notes:

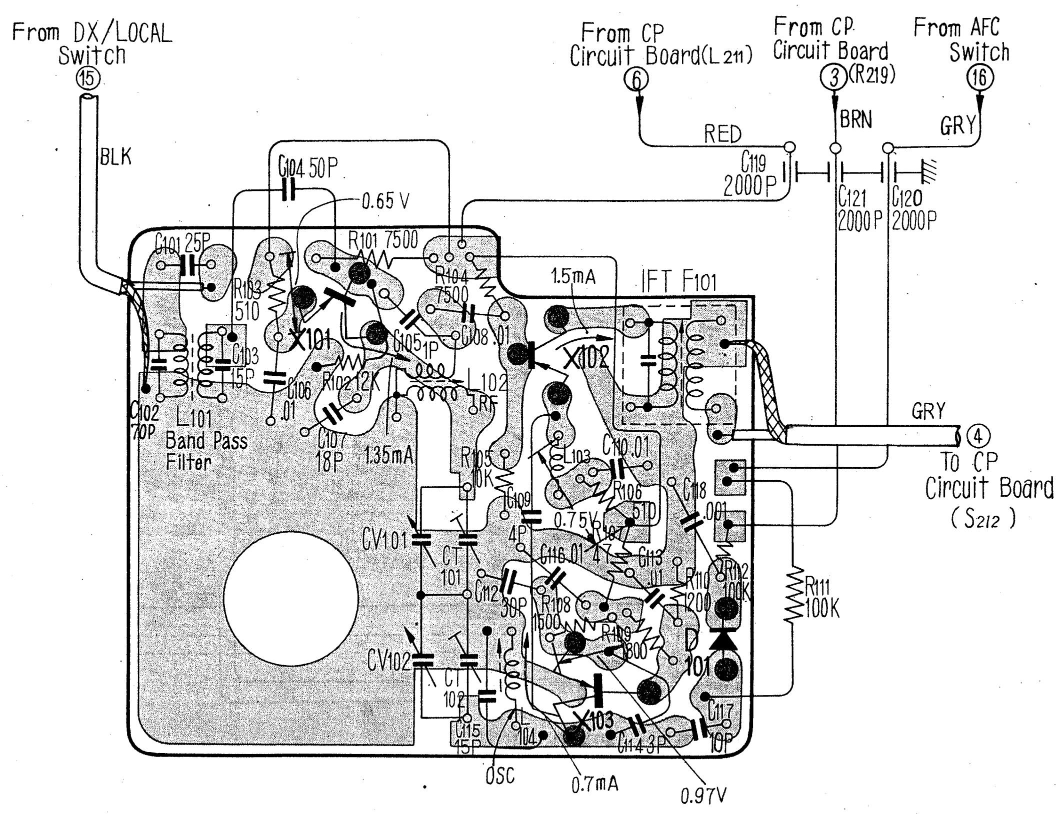
1. All resistors and capacitors are rated in Ω and μF, unless otherwise noted.
2. Capacitor marked with △ is built in IF Transformer.
3. Resistor marked with ※ are to be selected in value.
4. Voltage values shown are measured to ground circuit with a DC voltmeter (20 kΩ/volt or more) with no radio signal received.
   Current values shown are measured with a DC ammeter with no radio signal received.
   Current and Voltage values shown in ( ) are measured with no radio signal received and with band selector set to AM.
   Variations may be noted due to normal production tolerances.
5. ME. shows the tuning meter.

Ref. No.	Switch	Position
S001	AFC ON/OFF	OFF
S002, 003	AM, FM DX/Local	DX
S201~212	Band Setting	FM
S301~308	AM/FM Selecting	FM
S401	Power ON/OFF	OFF
S402	Lamp ON/OFF	OFF

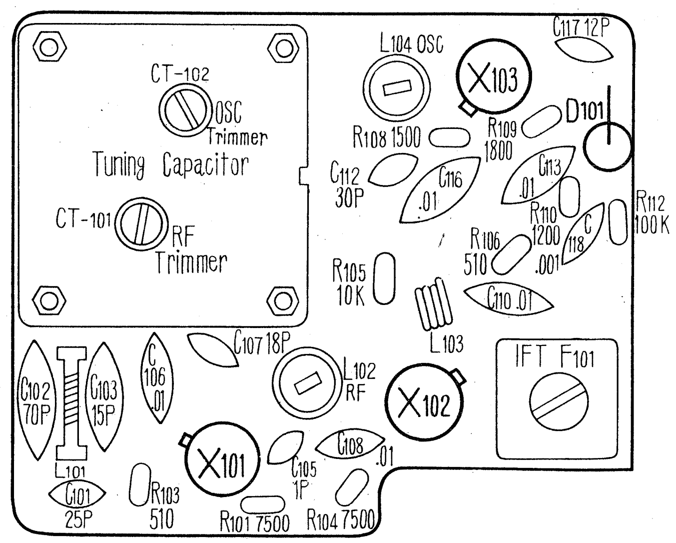


Mounting Diagram

FM Tuner Block (FMC-6AW)



— Component Side —



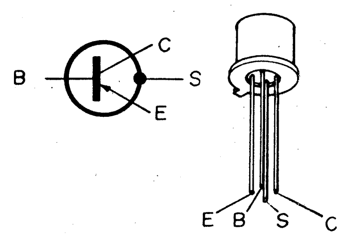
C104, C109, C114, C115, R102, R107, R111 : Mounted on the conductor side.

Circuit Board No. 1−538−378−12

X101 2SA456 (2SA455)

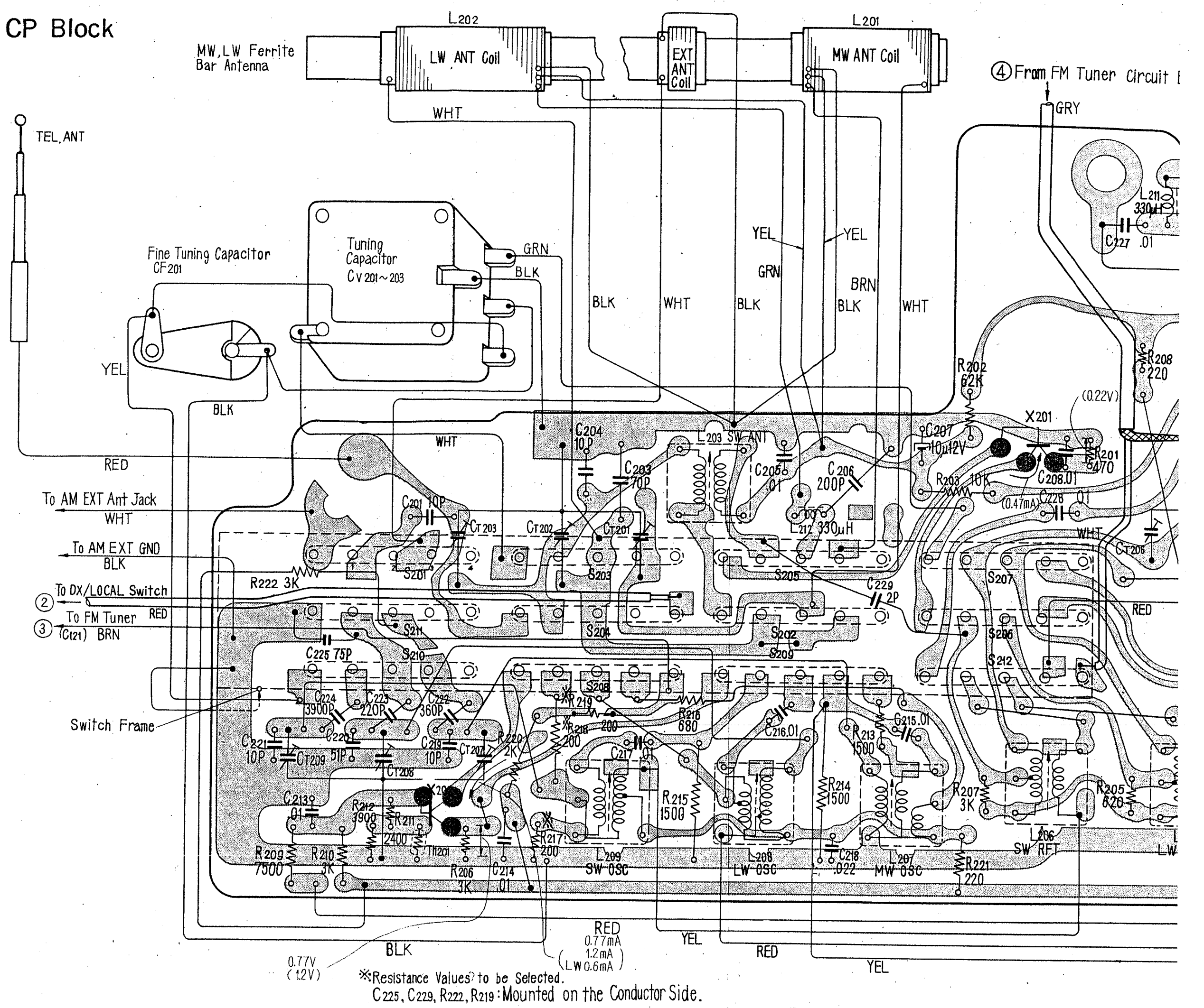
X102 2SA456 (2SA455)

X103 2SA456 (2SA455)



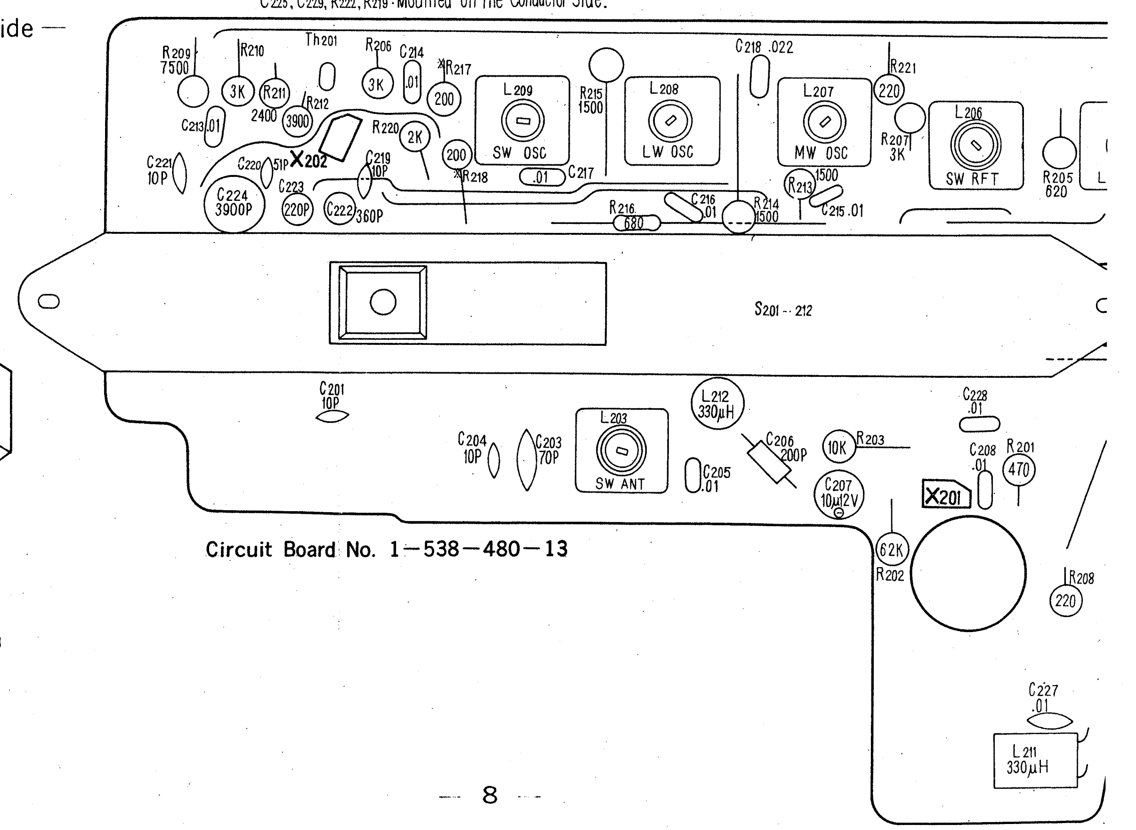
Mounting Diagram

CP Block



MW, LW Ferrite Bar Antenna
L202 LW ANT Coil
EXT ANT Coil
L201 MW ANT Coil
(4) From FM Tuner Circuit
GRY
TEL. ANT
Fine Tuning Capacitor CF201
Tuning Capacitor Cv201~203
To AM EXT Ant Jack WHT
To AM EXT GND BLK
(2) To DX/LOCAL Switch RED
(3) To FM Tuner (C121) BRN
Switch Frame
0.77V (1.2V)
RED 0.77mA 1.2mA (LW 0.6mA)
※Resistance Values to be Selected.
C225, C229, R222, R219 : Mounted on the Conductor Side.

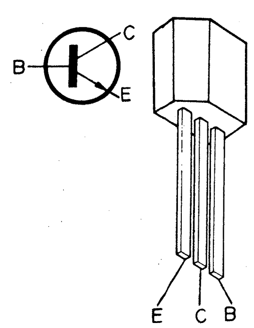
— Component Side —



Circuit Board No. 1−538−480−13

X201 2SC403A

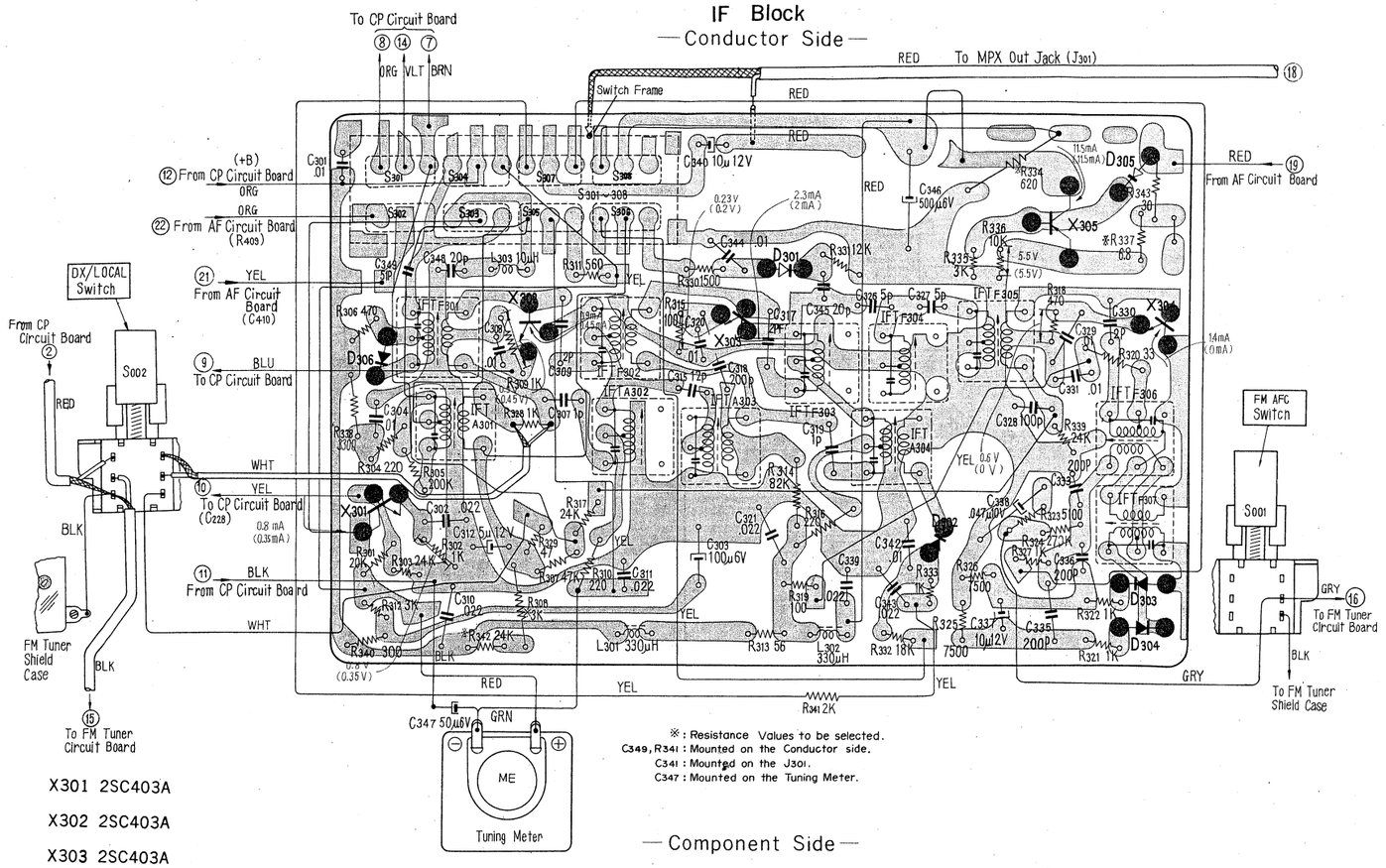
X202 2SC633



Mounting Diagram

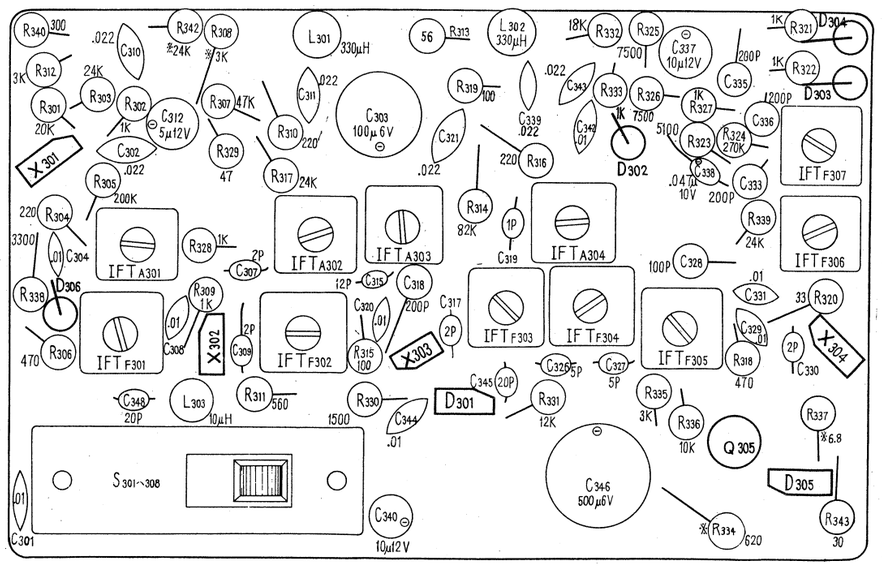
IF Block

— Conductor Side —



※ : Resistance Values to be selected.
C349, R341 : Mounted on the Conductor side.
C341 : Mounted on the J301.
C347 : Mounted on the Tuning Meter.

— Component Side —



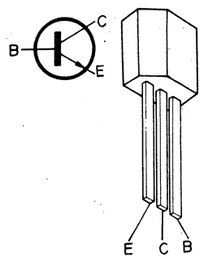
Circuit Board No. 1—538—481—14

X301 2SC403A

X302 2SC403A

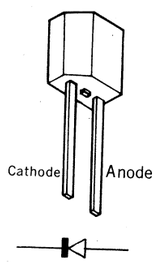
X303 2SC403A

X304 2SC403A

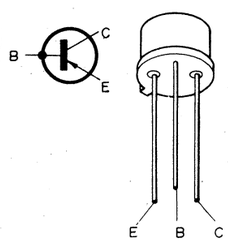


D301 1T240 A

D305 1T240 A



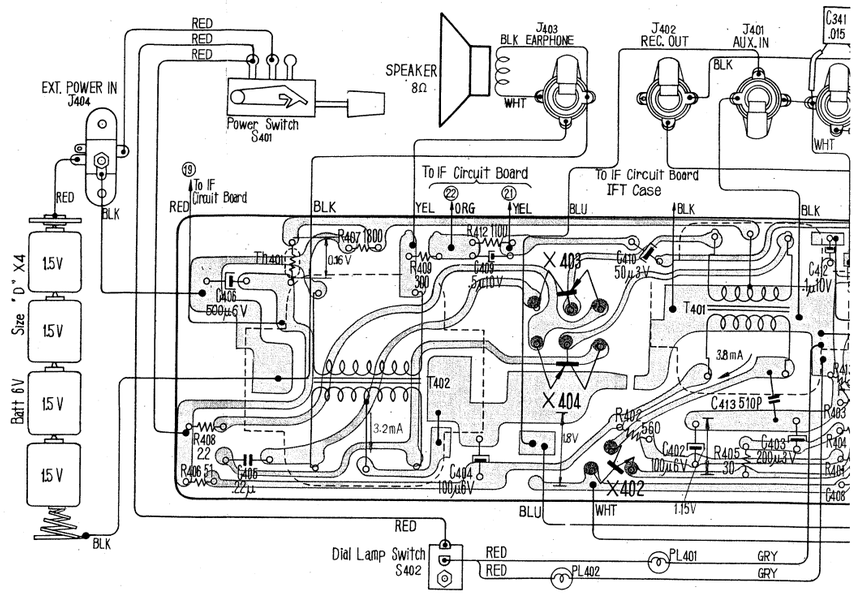
X305 2SB379



Mounting Diagram

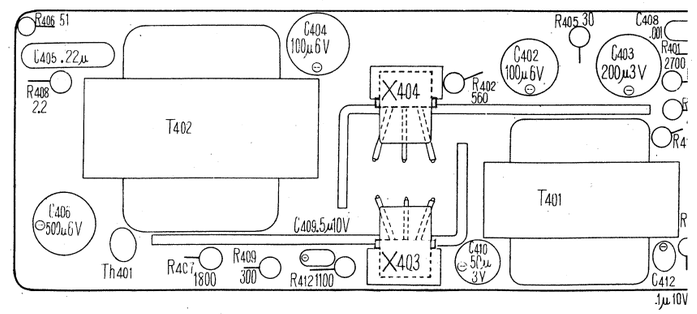
AF Block

— Conductor Side —



C413 : Mounted on the conductor side.

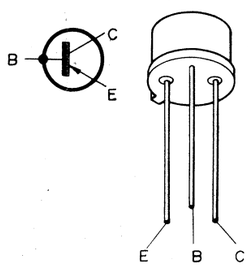
— Component Side —



Circuit Board No. 1—538—5

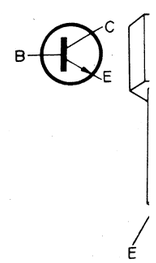
X403 2SB383

X404 2SB383



X401 2SC63

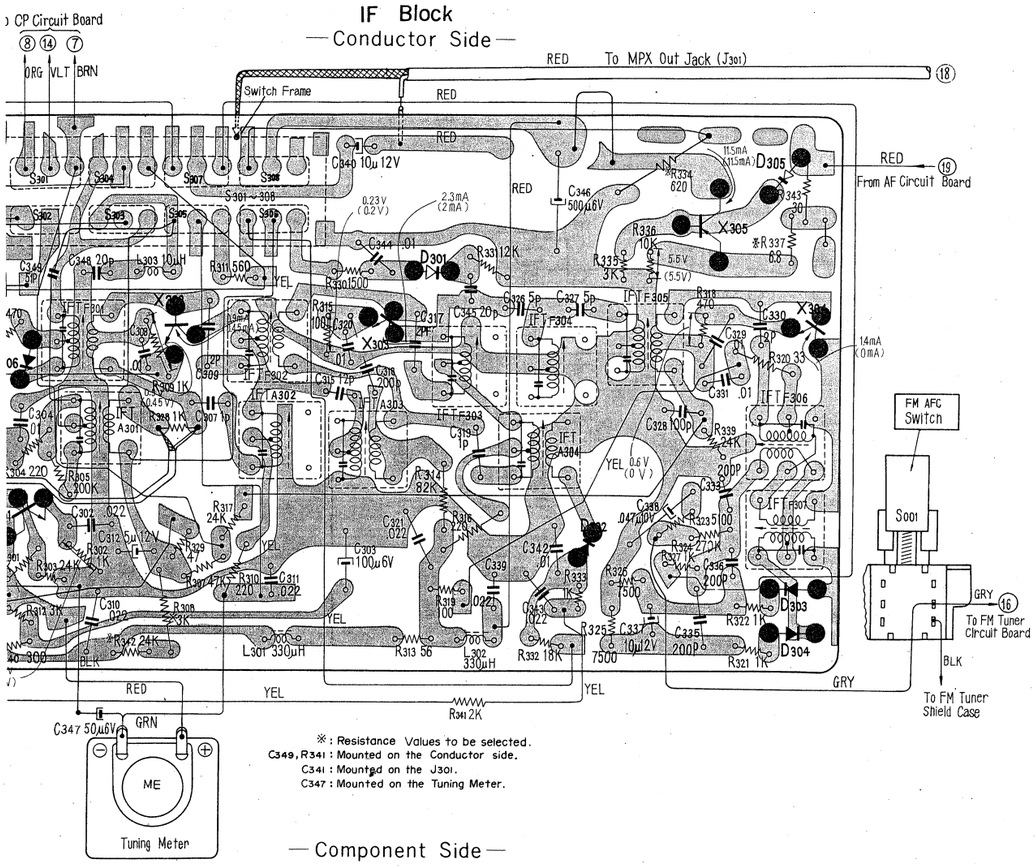
X402 2SC63



Mounting Diagram

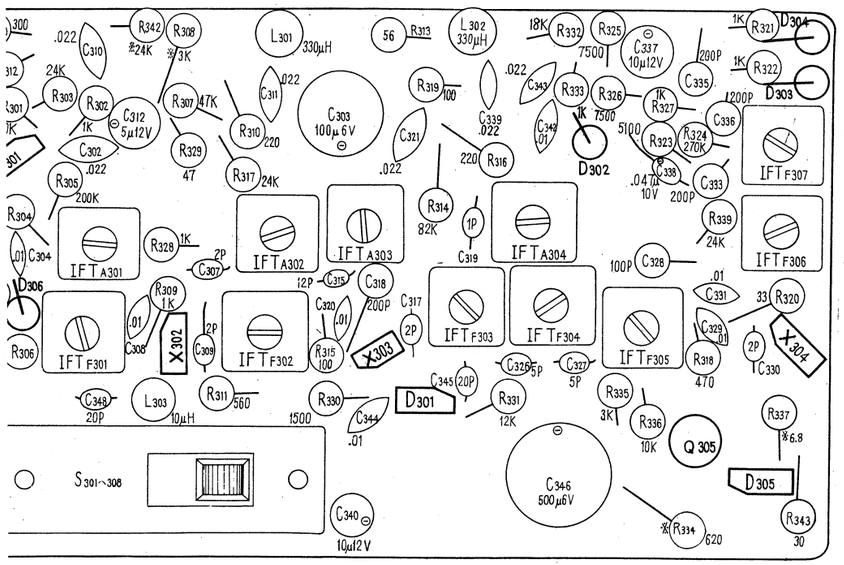
IF Block

— Conductor Side —



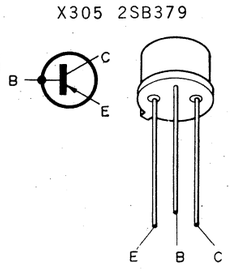
※ : Resistance Values to be selected.
C349, R341 : Mounted on the Conductor side.
C341 : Mounted on the J301.
C347 : Mounted on the Tuning Meter.

— Component Side —



uit Board No. 1—538—481—14

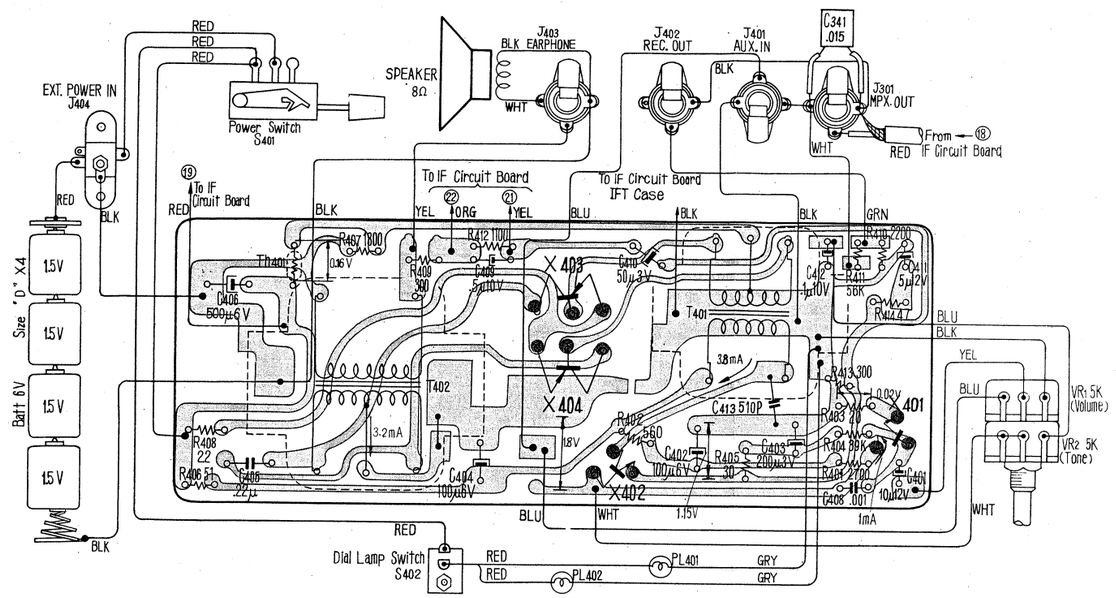
X305 2SB379



Mounting Diagram

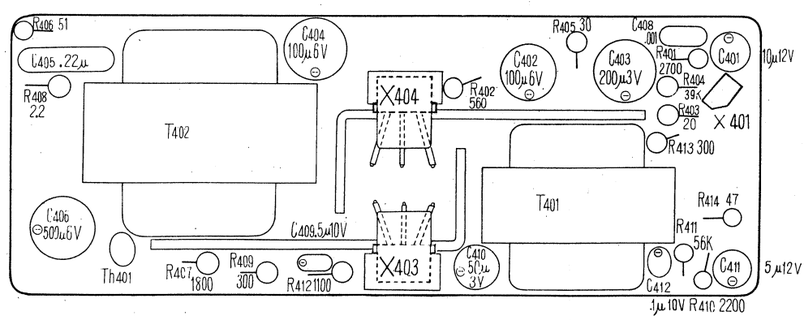
AF Block

— Conductor Side —



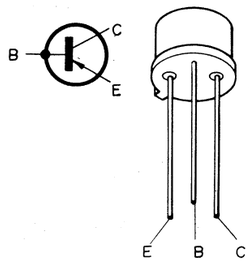
C413 : Mounted on the conductor side.

— Component Side —

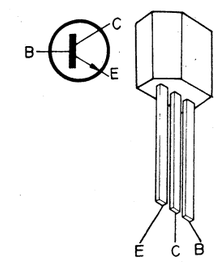


Circuit Board No. 1—538—538—12

X403 2SB383
X404 2SB383



X401 2SC633
X402 2SC633

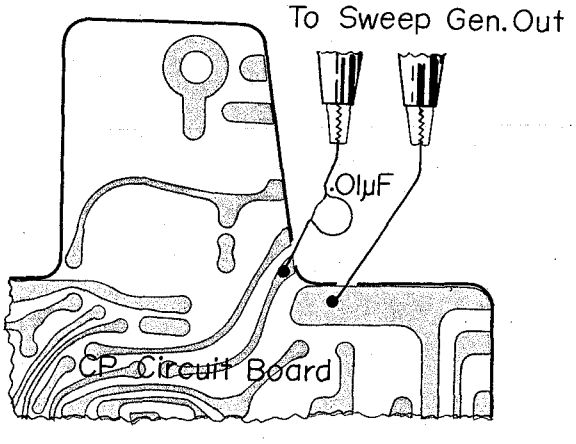


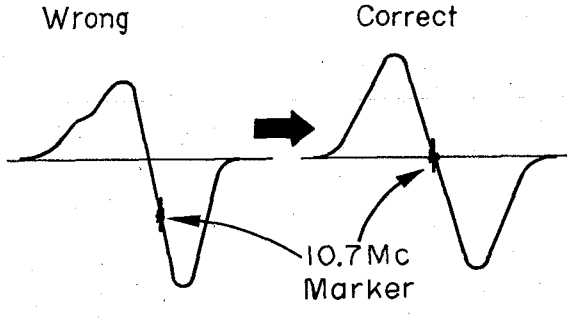
AM IF Alignment

SSG (Standard Signal Generator) Coupling	SSG Freq.	Connect VTVM	Adjust	Remarks
Loop Antenna	455 Kc	To Earphone jack with 8Ω load resistor in parallel	$IFTA_{301}$ ≀ $IFTA_{304}$	1. Turn tuning capacitor to minimum capacitance position. 2. Adjust for maximum meter reading.

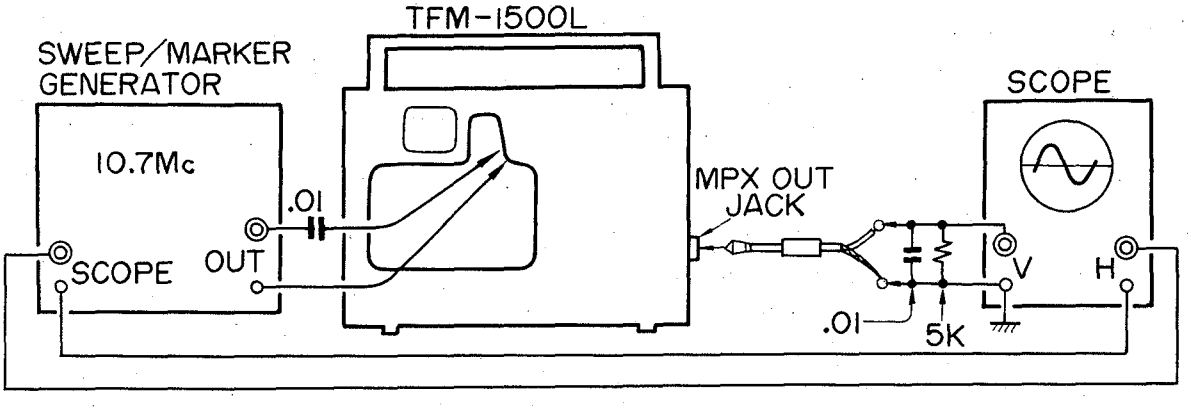
FM IF Alignment

Connect Sweep Generator	Sweep Generator Freq.	Marker Generator Freq.	Connect Oscilloscope	Adjust	Remarks
(See Fig. 1)	10.7 Mc sweep width: approx. 500kc	10.7 Mc	MPX OUT Jack	$IFTF_{301}$ ≀ $IFTF_{307}$	Adjust for maximum gain with symmetrical S curve as shown in Fig. 2



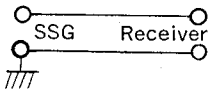
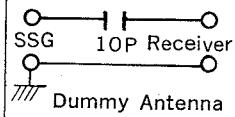


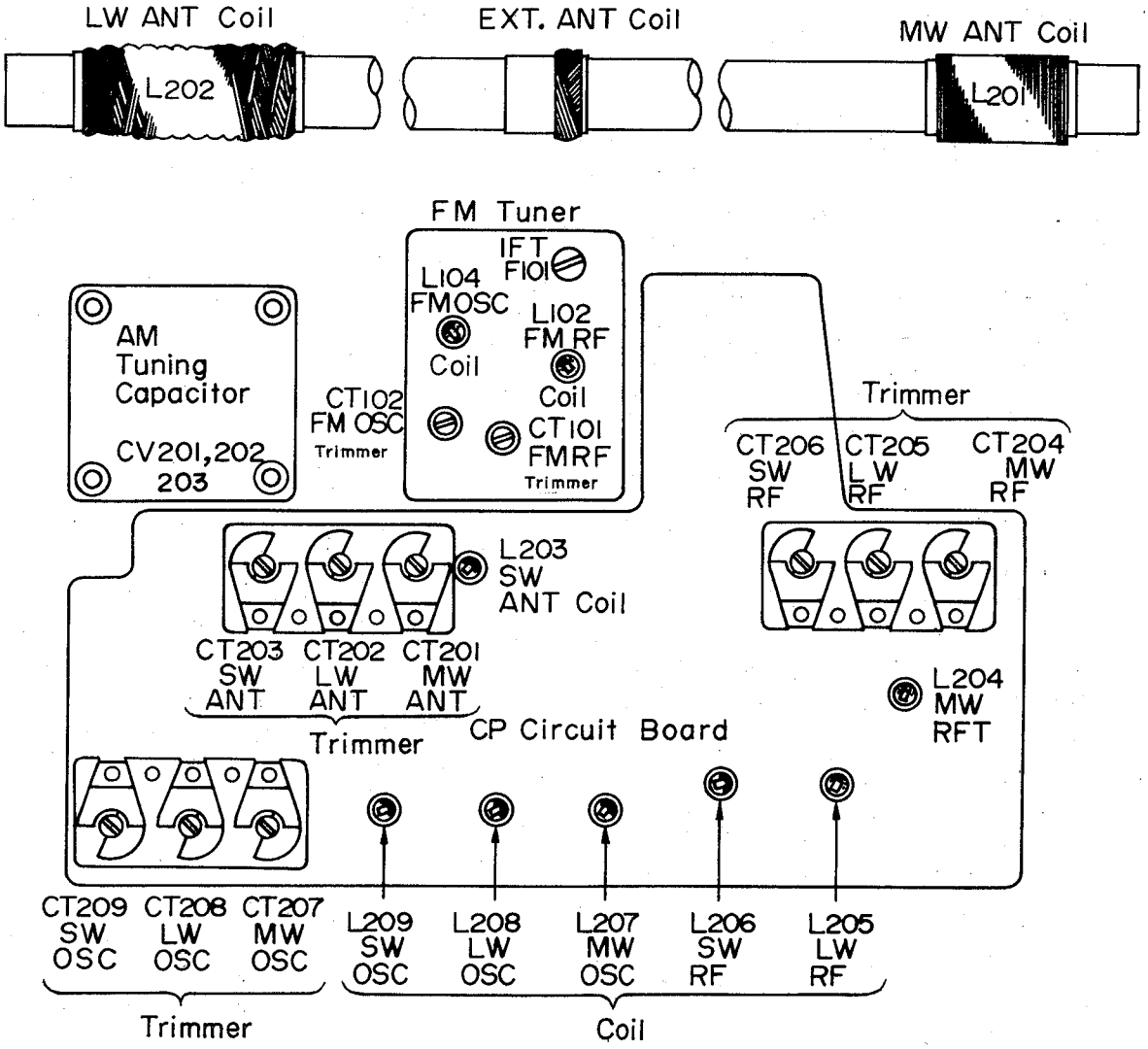
(Fig. 2)



FM IF Alignment test set-up (Fig. 1)

Frequency Coverage and Tracking Adjustment

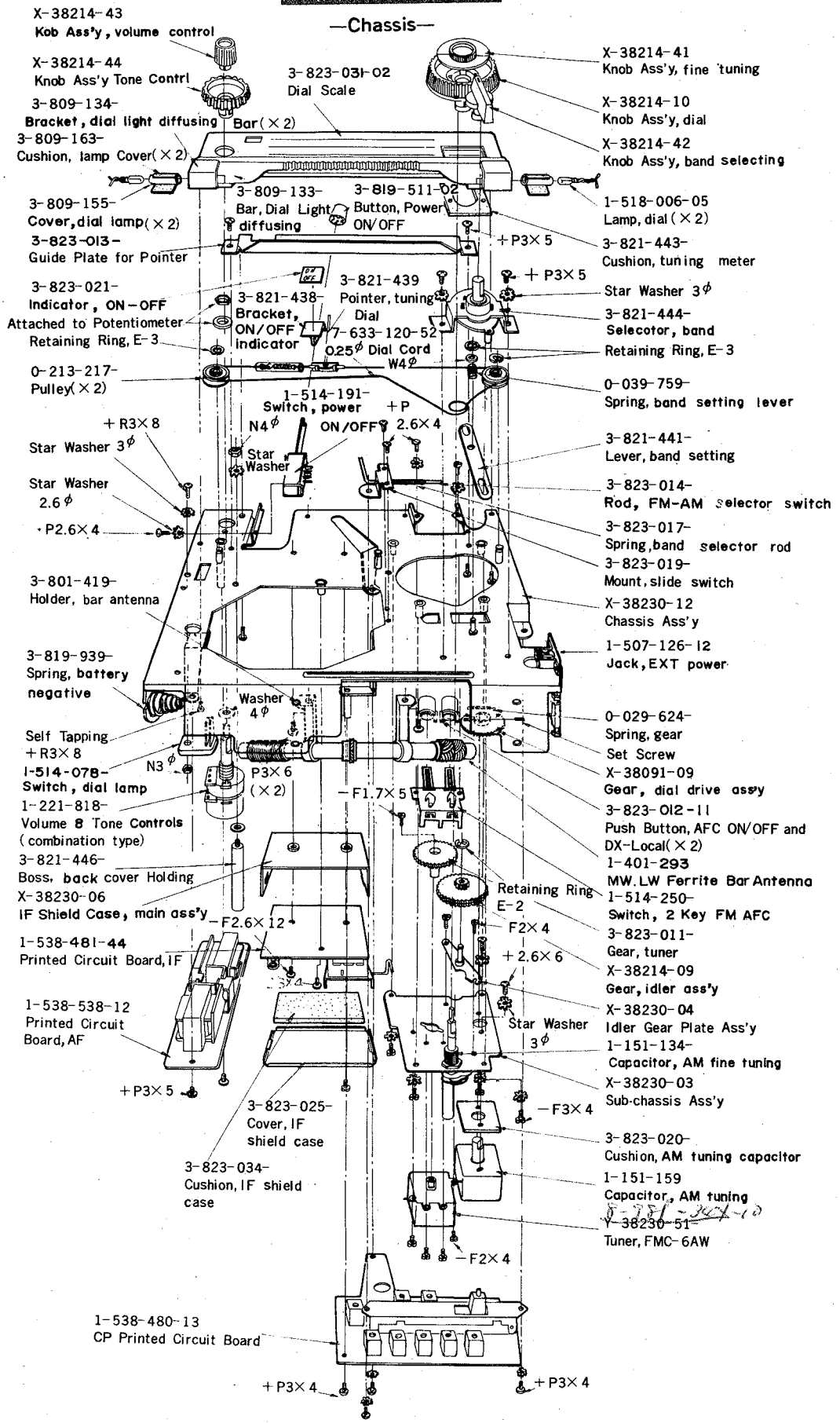
Adj. Item	SSG (Standard Signal Generator) Coupling	SSG Freq.	Receiver Dial Setting	Connect VTVM	Adjust	Remarks
FM Frequency Coverage	 Connect the SSG directly to the Antenna terminal (marked "RED" on the CP Circuit Board) and ground.	85.5 Mc (400c/s, ±22.5Kc FM)	Fully left	To Earphone jack with 8Ω load resistor in parallel.	FM OSC Coil (L_{104})	Adjust for maximum meter reading. Fine Tuning: Set the Slit Mark on the Fine Tuning Knob in the vertical direction. Volume: MAX. Tone: HIGH. Local: OFF AFC: OFF Power Supply: DC 6V
		109.5 Mc (〃)	Fully right		FM OSC Trimmer (C_{T102})	
FM Tracking	—ditto—	85.5 Mc (〃)	Tune to 85.5 Mc signal	—ditto—	FM RF Coil (L_{102})	—ditto—
		109.5 Mc (〃)	Tune to 109.5 Mc signal		FM RF Trimmer (C_{T101})	
SW Frequency Coverage	 Connect the SSG to the Antenna terminal (marked "RED" on the CP Circuit Board) and ground of the set through the Dummy Antenna.	5.85 Mc (1000 c/s, 30% AM)	Fully left	—ditto—	SW OSC Coil (L_{209})	—ditto—
		16.7Mc (〃)	Fully right		SW OSC Trimmer (C_{T209})	
SW Tracking	—ditto—	5.85 Mc (〃)	Tune to 5.85 Mc signal	—ditto—	SW ANT Coil (L_{203}) SW RF Coil (L_{206})	—ditto—
		16.7 Mc (〃)	Tune to 16.7Mc signal		SW ANT Trimmer (C_{T203}) SW RF Trimmer (C_{T206})	
MW Frequency Coverage	Loop Antenna	520 Kc (〃)	Fully left	—ditto—	MW OSC Coil (L_{207})	—ditto—
		1,680 Kc (〃)	Fully right		MW OSC Trimmer (C_{T207})	
MW Tracking	—ditto—	620 Kc (〃)	Tune to 620 Kc signal	—ditto—	MW ANT Coil (L_{201}) MW RF Coil (L_{204})	—ditto—
		1,400 Kc (〃)	Tune to 1,400Kc signal		MW ANT Trimmer (C_{T201}) MW RF Trimmer (C_{T204})	
LW Frequency Coverage	—ditto—	145 Kc (〃)	Fully left	—ditto—	LW OSC Coil (L_{208})	—ditto—
		300 Kc (〃)	Fully right		LW OSC Trimmer (C_{T208})	
LW Tracking	—ditto—	150 Kc (〃)	Tune to 150Kc signal	—ditto—	LW ANT Coil (L_{202}) LW RF Coil (L_{205})	—ditto—
		280 Kc (〃)	Tune to 280Kc signal		LW ANT Trimmer (C_{T202}) LW RF Trimmer (C_{T205})	


LW ANT Coil
L202
EXT. ANT Coil
MW ANT Coil
L201
FM Tuner
IFT
FI01
L104
FMOSC
Coil
L102
FM RF
Coil
CT102
FM OSC
Trimmer
CT101
FM RF
Trimmer
AM
Tuning
Capacitor
CV201,202
203
Trimmer
CT206
SW
RF
CT205
LW
RF
CT204
MW
RF
L203
SW
ANT Coil
CT203
SW
ANT
CT202
LW
ANT
CT201
MW
ANT
Trimmer
CP Circuit Board
L204
MW
RFT
CT209
SW
OSC
CT208
LW
OSC
CT207
MW
OSC
Trimmer
L209
SW
OSC
L208
LW
OSC
L207
MW
OSC
L206
SW
RF
L205
LW
RF
Coil

NOTE

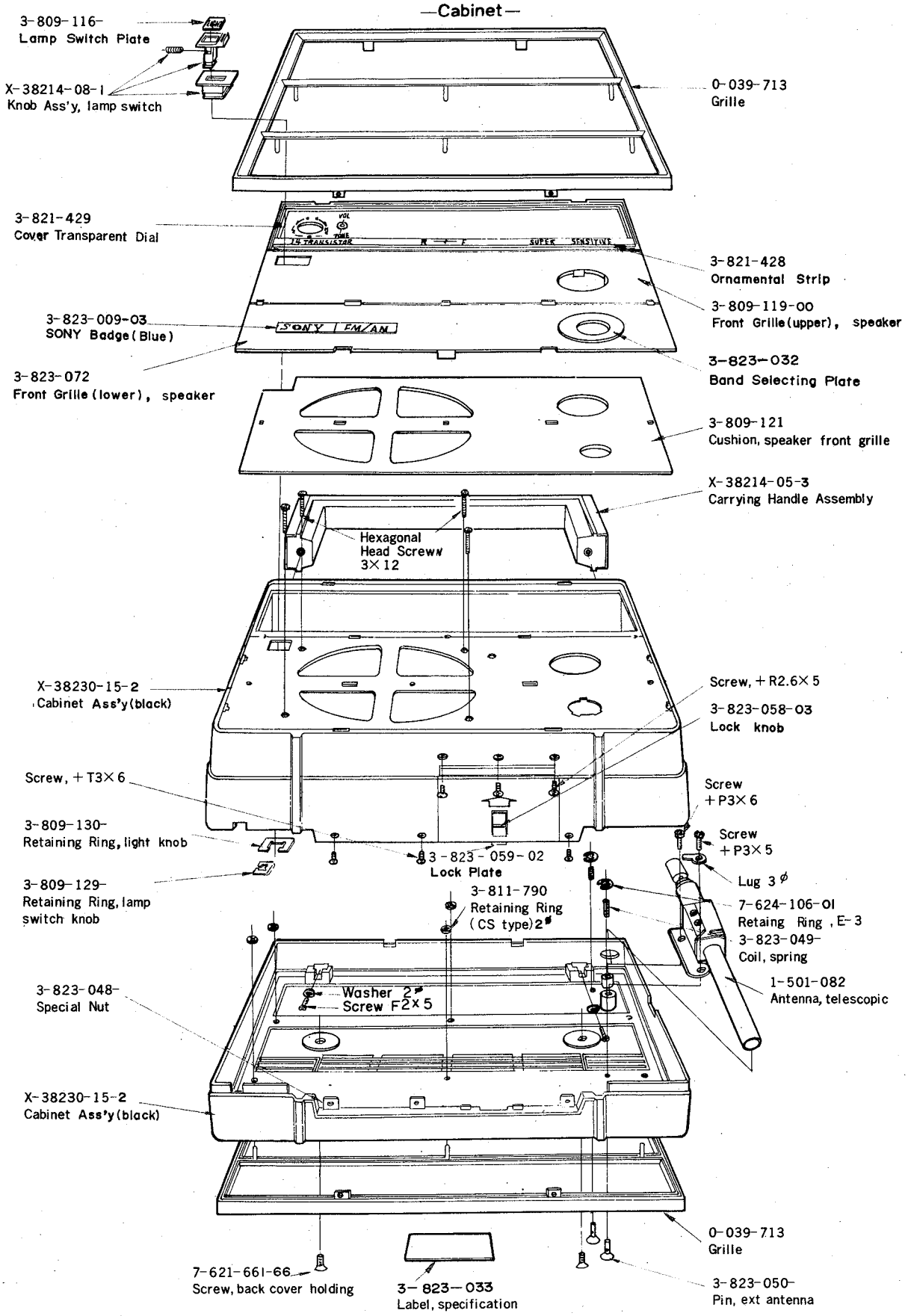
Exploded Diagram

—Chassis—



in Japan

Exploded Diagram



Complete Spare Parts List for TFM-1500L

April, 1968

Part No.	Description
A. Cabinet and Appearance Items	
Y-38230-85-1	Completed Cabinet, including ----------
X-38230-15-2	Cabinet Ass'y (black) ----------
X-38214-08-1	Lamp, switch knob ass'y ----------
X-38214-05-3	Carrying Handle Ass'y ----------
3-823-009-03	SONY Badge (Blue) ----------
-072	Lower Front Grille Speaker ----------
-032	Band Selecting Plate ----------
-033	Label, specification ----------
-046-11	Jack Plate ----------
-048	Special Nut ----------
-058-03	Lock Knob ----------
-059-02	Lock Plate ----------
-060	Lock Spring ----------
-061	Lock Washer ----------
-062	Screw (TA 3 x 14) ----------
0-039-713	Grille ----------
3-809-116	Lamp Switch Plate ----------
-119-00	Upper Front Grille Speaker ----------
-121	Cushion, front grille speaker ----------
-125	Bracket, grille ----------
-130	Retaining Ring, light knob ----------
-162	Adhesive Tape ----------
3-811-790	Retaining Ring CS Type (2ø) ----------
3-821-428	Ornamental Strip ----------
-429	Dial Cover Transparent ----------
-442	Mount, plate band selector ----------
-447	Cushion, ornamental strip A ----------
-448	Cushion, ornemental strip B ----------
7-621-305-12	Screw F 2x3 (for Cabinet Trimming) ----------
-305-32	" F 2x5 (for Cabinet Trimming) ----------
-305-42	" F 2x6 (for Cabinet Trimming) ----------
-720-21	Self Tapping Screw R 2x5 (for Lock Knob) --------
-721-61	Self Tapping Screw R 2.6x5 (for Battery Lid) ----
7-622-108-02	Nut 3ø (for Carrying Handle) ----------
7-623-105-12	Washer 2ø (middle) (for Cabinet Trimming, Lock Knob) ----------

Part No.	Description
7-623-108-22	Washer 3ø (large) (for Carrying Handle)
-405-01	Star Washer 2ø (for Cabinet Trimming)
-408-01	Star Washer 3ø (for Carrying Handle)
3-823-063-01	Badge Cushion
	* * * * * *
X-38214-41	Fine Tuning Knob Ass'y
-42	Band Selecting Knob Ass'y
-43	Volume Knob Ass'y
-10	Dial Knob Ass'y
-44	Tone Knob Ass'y
3-823-012-11	Push Button
3-821-439	Pointer, tuning dial
-473-02	Crystal Lid
-754	DC Jack Plate

B. Mechanical Parts

X-38230-12	Chassis Ass'y
-03	Sub-chassis Ass'y
-04	Idler Gear Plate Ass'y
-06	IF Shield Case, main ass'y
X-38091-09	Gear, dial drive ass'y
-08	Plate, battery positive contact ass'y
X-38214-09	Gear, idler ass'y
3-823-031-02	Dial Scale
-011	Gear, tuner
-013	Guide, plate for pointer, tuning
-014	Rod, FM-AM select switch
-015	Plate, FM-AM select switch
-017	Spring, band select rod
-019	Mount Slide Switch
-020	Cushion, AM tuning capacitor
-021	Indicator, ON-OFF
-025	Cover, IF shield case
-034	Cushion, IF shield case
-047	Plate, battery holder
-049	Coil Spring
-050	Pin Ext. Ant.
-057	Special Screw
-026	Insulator Plate

Part No.	Description
3-823-034	Cushion
0-029-624	Spring, gear
0-039-759	Spring, band setting lever
0-213-217	Pulley
3-801-419	Holder, bar antenna
3-803-046	Lug, external antenna
3-819-939	Spring, battery negative
3-809-133	Bar, dial light diffusing
-155	Cover, dial lamp
-134	Bracket, dial light diffusing bar
-163	Cushion, lamp cover
3-819-511-02	Push Power Button ON/OFF Switch
-527	Ribbon
3-821-459	Lever, plate
-462	Driving Plate
-438	Bracket, ON/OFF indicator
-443	Cushion, tuning meter
-444	Selector, band
-446	Boss, back cover holding
3-423-102	Retainer, transistor X3,4
3-855-001	Heat Sink
3-820-028	Cushion, battery holder
3-824-623	Cushion B
3-998-010	Battery Holder

C. Electrical Parts

~~1-538230-51~~ 8-981-327-10	Tuner, FMC-6AW
1-501-082	Telescopic Antenna (TEL ANT)
1-502-069	Speaker (S,P)
1-507-169-12	Jack, (J301, J401, J402, J403)
-902-02	Nut, jack (J301, 401, 402, 403)
-126-12	Jack, EXT power (J404)
1-514-078	Switch, dial lamp (S402)
-191	Switch, power ON/OFF (S403)
1-518-006-05	Lamp, dial (PL1,2)
1-520-073	Meter, tuning (M, E)
1-514-250	Switch, 2 Key FMAFC (S001 - 003)
1-513-314	Switch, band setting (S201 - 212)
-275	Switch, FM-AM select (S301 - 308)
1-538-378-12	Printed Circuit Board (FM Tuner)
-480-13	" " " (CP)
1-518-095-15	Lamp, dial

Part No.	Description
1-538-481-14	Printed Circuit Board (IF) ----------
-538-12	" " " (AF) ----------
	Coil and Transformer
1-401-293	Coil, MW LW ferrite bar antenna (L201, 202) -------
-216	" , band pass filter (L101) ----------
1-405-135	" , FM OSC (L104) ----------
-282	" , OSC injection (L103) ----------
-162	" , FM RF (L102) ----------
1-401-294	" , SW, antenna (L203) ----------
1-405-275	" , MW OSC (L207) ----------
-159	" , SW OSC (L209) ----------
-158	" , LW OSC (L208) ----------
1-425-232	" , MW RF (L204) ----------
-277	" , SW RF (L206) ----------
-276	" , LW RF (L205) ----------
1-407-050	Micro Inductor 330uH (L210,211,212,301,302) -----
-082	" " 10uH (L303) ----------
1-403-231	Transformer, FM IF (Single Tuned) (IFTF101) -------
-243	" , " (") (IFTF301) -------
-244	" , " (") (IFTF304,303,302, 305) -------
-272	FM Discriminator (Primary) (IFTF306) ----------
-273	" " (Secondary) (IFTF307) ----------
-026	Transformer, AM IF (Single Tuned) (IFTA301,303) ---
-110	" , " (") (IFTA302,304) ---
1-423-100	" , driver (T401) ----------
1-427-088	" , output (T402) ----------
	Variable Capacitor
1-151-088	Capacitor, FM tuning (CV101 - 102, CT101 - 102) ---
-159	" , AM tuning (CV201 - 203) ----------
-134	" , AM fine tuning (CF201) ----------
1-141-015	" , trimmer 3 gang (CT201 - 209) ----------
	Potentiometer
1-221-818	Volume and Tone Control (VR1,2) ----------

Part No.	Description	
	Semiconductor	
	Transistor 2SA456 (X101,102,103)	----------
	" 2SC403 (X201,301,302,303,304)	----------
	" 2SC401 (X202,402)	----------
	" 2SC402 (X401)	----------
	" 2SB379A(X305)	----------
	" 2SB383 (X403,404)	----------
	Diode 1S351S (D101)	----------
	" 1T240A (D301,305)	----------
	" 1T23 (D302)	----------
	" 1T26 (D303,304,306)	----------
8-690-004	Thermistor S-250 (Th201)	----------
8-691-002	" CS47 (Th401)	----------
	Carbon Resistor (RD1/8US ±5%)	
1-240-436	R343	30 ohms ----------
-449	R315	100 " ----------
-457	R304,310	220 " ----------
-460	R340	300 " ----------
-465	R318,201	470 " ----------
-467	R311	560 " ----------
-473	R302,309,321,322	1K " ----------
-477	R213,214,215,330	1.5K " ----------
-480	R220,341	2K " ----------
-482	R211	2.4K " ----------
-484	R206,210,222,308, 312,335	3K " ----------
-485	R338	3.3K " ----------
-487	R212	3.9K " ----------
-490	R323	5.1K " ----------
-494	R209,325,326	7.5K " ----------
-497	R203,336	10K " ----------
-499	R331	12K " ----------
-503	R332	18K " ----------
-504	R301	20K " ----------
-506	R303,308,317,339	24K " ----------
-513	R307	47K " ----------
-516	R202	62K " ----------
-519	R314	82K " ----------
-531	R324	270K " ----------

Part No.	Description		
1-240-421	R337 (Adjust)	6.8 ohms	----------
-456	R217,218,219 (Adjust)	200 "	----------
-468	R334 (Adjust)	620 "	----------
-484	R342 (Adjust)	3K "	----------
	Carbon Resistor (RD1/8US ±10%)		
1-240-437	R320	33 ohms	----------
-441	R329	47 "	----------
-443	R313	56 "	----------
-449	R319	100 "	----------
-457	R208,221,310,316	220 "	----------
-465	R306	470 "	----------
-467	R204	560 "	----------
-468	R205	620 "	----------
-473	R327,328,333	1K "	----------
-484	R207	3K "	----------
-528	R305	200K "	----------
	Carbon Resistor (RD1/8SR ±5%)		
1-244-469	R216	680 ohms	----------
	Composition Resistor (RC1/8 ±10%)		
1-201-951	R403	20 ohms	----------
-278	R405	30 "	----------
-264	R414	47 "	----------
-968	R406	51 "	----------
-277	R409,413	300 "	----------
-872	R402	560 "	----------
-637	R412	1.1K "	----------
-650	R407	1.8K "	----------
-863	R410	2.2K "	----------
-819	R401	2.7K "	----------
-695	R404	39K "	----------
-085	R411	56K "	----------
-401	R408	2.2K " (RC¼)	----------
-868	R111	100K "	----------

Part No.	Description				
	Ceramic Resistor (RT1/10)				
1-208-105	R107	47 ohms	±10%		
-026	R103,106	510 "	±5%		
-054	R101,104	7.5K "	"		
-057	R105	10K "	"		
-145	R112	100K "	±10%		
-059	R102	12K "	(RT1/10RL ±5%)		
	Micro Resistor (RD1/32, ±5%)				
1-209-765	R110	1.2K ohms			
-766	R108	1.5K "			
-878	R109	1.8K "			
	Capacitor				
	Ceramic Capacitor				
1-101-951	C105,307,319	1PF	±0.5PF	50WV	
-952	C229,309,317,330	2PF	"	"	
-953	C114	3PF	±5%	"	
-954	C109	4PF	±0.5PF	"	
-955	C210,326,327	5PF	"	"	
-959	C201,204,219,221	10PF	±5%	"	
-961	C315,117	12PF	"	"	
-861	C115,103	15PF	"	"	
-862	C107	18PF	"	"	
-864	C212,345,348	20PF	"	"	
-867	C212	24PF	"	"	
-090	C101	25PF	±10%	"	
-871	C112	30PF	±5%	"	
-028	C104	50PF	±10%	"	
-882	C220	51PF	±5%	"	
-883	C349	51PF	±10%	"	
-884	C211	56PF	±5%	"	
-791	C102	70PF	"	25WV	
-319	C203	70PF	"	50WV	
-890	C225	75PF	"	"	
-141	C227,301	0.01uF	+80% -20%	25WV	
-905	C106,108,110, 113,116	0.01uF	±20%	50WV	

Part No.	Description				
	Mylar Capacitor				
1-105-821-12	C408,118	0.001uF		50WV	-------
-411-12	C205,208,209,213,214, 215,216,217,228,304, 308,320,329,331,342, 344	0.01uF	±20%	35WV	-------
-412-12	C341	0.015uF	"	"	-------
-413-12	C218,302,310,311,321, 339,343	0.022uF	"	"	-------
-419-12	C405	0.22uF		"	-------
	Styrol Capacitor				
1-103-601	C328	100PF	±5%	50WV	-------
-608	C206,318,333,335,336	200PF	"	"	-------
-609	C223	220PF	"	"	-------
-614	C222	360PF	"	"	-------
-618	C413	510PF	"	"	------
-639	C224	3900PF	"	"	-------
	Electrolytic Capacitor				
1-121-280	C312,411	5uF		12WV	-------
-282	C207,337,340,401	10uF		"	-------
-287	C410	50uF		3WV	--------
-322	C347	"		6WV	--------
-291	C226,303,402,404	100uF		"	--------
-294	C403	200uF		3WV	--------
-359	C346,406	500uF		6WV	--------
	Aluminium Electrolytic Capacitor				
1-127-044	C338	0.047uF	$(^{+40\%}_{-20\%}$	10WV	-------
-019	C412	0.1uF	±20%	"	-------
-022	C409	0.5uF	"	"	-------
	Feed Through Capacitor				
1-101-799	C119,120,121	2000PF	----------		

Part No.	Description
D. Screw & Washer	(Minimum Q'ty for Ordering: 100 pcs.)
	Screw
7-621-259-25	(+) P 2.6 x 4 (for Push Switch, IF, Key Switch, Bracket Switch)
-45	(+) P 2.6 x 6 (for Tuning Capacitor)
-75	(+) P 2.6 x 12 (for IF)
-261-25	(+) P 3 x 4 (for Band Selector, Pointer Guide, Sub-chassis, Bracket Slide Switch)
-35	(+) P 3 x 5 (for AF, RF, Slide Switch, Telescopic Antenna)
-45	(+) P 3 x 6 (for Antenna Holder)
-55	(+) P 3 x 8 (for Lamp Switch)
-305-22	F 2 x 4 (for FM Tuner, Idler, EXT Power Jack)
-303-42	F 1.7 x 5 (for Tuner Gear)
-555-52	(+) K 2 x 8 (for Tuning Knob)
-461-46	(+) T 3 x 6 (for Back Cover Holding Boss)
-661-66	(+) RK 3 x 10 (for Back Cover Holding Boss)
-713-11	Set Screw 3 x 3 (for Gear)
-713-12	" " 3 x 3 (for Gear)
	Self Tapping Screw
7-621-721-71	(+) R 2.6 x 6 (for Dial Scale)
-722-41	(+) R 3 x 6 (for Telescopic Antenna Bracket, Jack Plate, Chassis)
	Nut
7-622-108-02	N 3ø (for Chassis, Speaker, Lamp Switch)
-110-02	N 4ø (for Back Cabinet Holding Boss)
	Washer
7-623-108-12	3ø (middle) (for Speaker)
-108-22	3ø (large) (for Idler)
-110-12	4ø (") (for Back Cabinet Holding Boss)
-110-02	4ø (small) (for Band Setting Lever, EXT. Terminal)

Part No.	Description
	Star Washer
7-623-407-01	2.6ϕ (for Push Switch, Tuning Capacitor) ----------
-408-01	3ϕ (for Sub-chassis, Lamp Switch, Telescopic Antenna Bracket, Setting Switch, Band Selector) ----------
-410-01	4ϕ (for Back Cabinet Holding Boss) ----------
	Retaining Ring (E-type)
7-624-104-01	E-2 (for Gear Shaft, Back Cover Holding Boss) -----
-106-01	E-3 (for Pulley, Band Setting Lever, EXT. Terminal)
	Lug
7-623-507-01	2.6ϕ (for Band Selecting Plate) ----------
-508-01	3ϕ (for Telescopic Antenna) ----------
	Eyelet
7-623-605-01	1.3x2.5 (for Dial String) ----------
-616-21	(Lug) 2x3 (for 2 Key Switch) ----------
	Dial String
7-633-120-52	0.25ϕ 730mm ----------

E. Attached Items

3-998-010	Battery Cylinder ----------
3-995-448-31	Instruction Manual ----------
3-998-901	Serial No. Label ----------
X-44900-02	Polishing Cloth ----------
1-504-034	Earphone ME-20 ----------
1-528-001	Battery, size "D" ----------
3-813-631	Polyethylene Bag ----------
3-821-450	Styro-foam Cushion Upper ----------
-451	" " Bottom ----------
3-823-051	Master Carton for 5 sets ----------
3-821-452-11	Packing Carton ----------